

Dr Kristopher Rallah-Baker

Australia's first Indigenous ophthalmologist makes history

Dr Kristopher Rallah-Baker has made history while working on the Lions Outback Vision Van, becoming Australia's first Indigenous ophthalmologist.

The Queensland doctor has been based with Lions Outback Vision – the outreach arm of the Lions Eye Institute (LEI) – since the beginning of 2018. He completed his formal training through the Royal Australian and New Zealand College of Ophthalmology in June.

Dr Rallah-Baker said his patients were excited to see

an Indigenous face on the other side of the slit lamp during eye examinations.

“It brings them great pride and joy to know that Indigenous peoples are achieving across all fields and expressing the opinions and cultural perspectives from within organisations to help improve lives,” he said.

“Being the first Indigenous ophthalmologist in Australia is of enormous importance, both symbolically and practically, because it breaks barriers that were once seen as impossible.”

While in Western Australia, Dr Rallah-Baker has worked in outreach ophthalmology on the Lions Outback Vision Van – a mobile eye health clinic which travels all over the state delivering care for people with a range of eye conditions, including cataract, glaucoma, trachoma and diabetic retinopathy.

Lions Outback Vision McCusker Director, Associate Professor Angus Turner said the formal completion of Dr Rallah-Baker's ophthalmology training was a significant moment for the Indigenous community.

“Kris is already making a big impact on the profession as a leader and advocate,” he said.

“With Indigenous Australians three times more likely to be blind than the general Australian population, Kris' voice will help focus attention on this significant public health issue.”

Dr Rallah-Baker is optimistic about the future of Indigenous eye health and believes partnerships will

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Saving sight for 50 years: Professor Ian Constable's remarkable legacy



2018 marks Professor Ian Constable's 50th year in ophthalmology

Professor Ian Constable, the founder of the Lions Eye Institute and a leading figure in Australian ophthalmology, is marking 50 years in the profession this year.

Professor Constable was wooed to Perth in 1975 from the United States. At the age of just 32, he took up the inaugural Lions Chair of Ophthalmology at The University of Western Australia and used it as a springboard to improve eye health services in the state, launch an innovative research program and elevate the cause of saving sight at all levels of government and in the business and wider communities.

Professor Constable recognised that to lift eye health services to the next level, he would need to create a stand alone research and clinical facility and 35 years ago, in 1983, the LEI was born. He was Managing Director of the LEI from 1983 to 2009.

LEI inaugural Chairman Brian King said Professor Constable had touched thousands of lives and his work had made a global impact.

“He can be immensely proud of his contribution in training generations of ophthalmologists both in Western Australia and in South-East Asia and his commitment to creating an Institute delivering the world's best practice in eye care, to the enormous benefit of our community,” Dr King said.

Over his career, Professor Constable has held many leadership positions, including President of the Asia Pacific Academy of Ophthalmology, Director of Eye Health Services of Western Australia and Chairman of the Premier's Science Council.

He has been the recipient of numerous awards, including the Order of Australia, ANZAC Peace Prize, National Entrepreneur of the Year

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ultimately close the eye health gap in Australia.

“The Lions Outback Vision model is an exceptional example of the correct way to deliver appropriate, culturally safe services to rural and remote communities. There are many wonderful non-Indigenous doctors providing outstanding services to Indigenous peoples and communities – Angus Turner being a leader in ophthalmology,” he said.

“Ultimately, Indigenous health is about a partnership and working together between Indigenous and non-Indigenous peoples. Each party brings a different perspective to health care and solving the complexities of Indigenous health.”

(not-for-profit category) and WA Citizen of the Year.

At the LEI Annual General Meeting in April this year, he was formally presented with a Lions Club International Foundation Melvin Jones Fellowship.

The Fellowship recognised Professor Constable's services and dedication to Lions and the community.

Research aims to unearth new genes linked to common eye diseases

LEI Managing Director Professor David Mackey will focus on discovering new genes responsible for glaucoma and myopia after securing significant new funding from the Commonwealth Government.

Professor Mackey is one of the world's top genetic ophthalmologists and researchers. He won a \$585,270 grant from the National Health and Medical Research Council in August for his research project: "Understanding, predicting, preventing and treating the highly heritable, common eye diseases glaucoma and

myopia to reduce blindness and visual impairment."

Professor Mackey, who is also Director of Ophthalmology and Visual Science at The University of Western Australia, said glaucoma was an inherited condition and the second leading cause of blindness while myopia was a risk factor for glaucoma and rates were rising.

"My research aims to discover new genes responsible for glaucoma and myopia," he said.

"This will help identify novel drugs to treat these



Professor David Mackey

diseases and help develop family-screening strategies to find undiagnosed cases of glaucoma before it affects sight.

"This will allow early intervention, which is crucial to achieve the best outcomes for patients. In addition, the grant will also allow me to assess new technologies to aid those already visually impaired."

Visionaries Luncheon an important way to say thank you

Every year, the LEI hosts the Visionaries Luncheon for some of our greatest supporters.

This year, the luncheon was held on April 19, with Dr Fred Chen and Dr Carla Mellough giving presentations that combined important eye health information with new research.

Dr Chen gave an overview of the main causes of irreversible blindness in WA: The challenges in diagnosis and the obstacles to treatment, while Dr Mellough spoke about potential solutions for these diseases using new laboratory techniques such as stem cells, gene therapies and disease models.



The 2018 Visionaries Luncheon brought together researchers and LEI supporters

We thank all our Visionaries for their ongoing support and commitment to saving sight.

Cutting-edge research implicates a common virus in long-lasting eye inflammation



Dr Valentina Voigt

Researchers from the Experimental Immunology group have discovered that contrary to expectations, a common virus (cytomegalovirus) triggers long-lasting inflammation in the eyes of hosts with healthy immune systems.

To determine whether cytomegalovirus could access the eyes of hosts with healthy immune systems, the researchers performed a series of experiments using a mouse version of cytomegalovirus and examined the effects of the infection on the eye.

Healthy eyes have been considered largely inaccessible to viruses, as well as “immune privileged” – meaning that exposure to a foreign antigen, such

as virus, should not trigger an inflammatory response. Outbreaks of viral diseases like Ebola and Zika have raised the possibility that viruses may cause enduring infections in the eye, but this has been thought to be a feature of exotic viral infections.

Published in the medical journal PLOS Pathogens, the research reported on the work of Dr Valentina Voigt, Professor Mariapia Degli-Esposti and the Experimental Immunology group.

These seminal studies were funded by the Stan Perron Charitable Trust, the Hardie Foundation and the National Health and Medical Research Council.

Dr Voigt said the findings challenged the belief that immune privileged tissues such as the eye were only accessible to cytomegalovirus when the infected host had a severely compromised immune system.

“Our findings suggest that common viruses may target the eye more frequently than appreciated, and indeed identify the eye as an unexpected reservoir for cytomegalovirus,” she said.

The research also highlighted the fact that cytomegalovirus infection triggers sustained inflammatory responses in the eye, including the neural retina.

While more research is needed to determine whether these unexpected findings extend to humans, they suggest that researchers and doctors may need to rethink the effect of cytomegalovirus – and, potentially, other viruses – on the eyes.

Some eye problems caused by dormant or reactivated cytomegalovirus in people with healthy immune systems may be misdiagnosed, leading to improper treatment that could damage vision.

The full paper can be read at:

<http://journals.plos.org/plospathogens/article?id=10.1371/journal.ppat.1007040>



Dr Samantha Lee at the ARVO Conference

LEI well represented at world's biggest eye research conference

A record number of LEI delegates attended the 2018 Association for Research in Vision and Ophthalmology (ARVO) conference in May.

ARVO is the world's leading eye research meeting and more than 10,000 delegates gathered in Hawaii to share the latest breakthroughs in vision research.

All LEI delegates presented, gave a poster presentation or contributed to a poster presentation at the conference, including:

- Professor David Mackey – Myopia research in the Australian context (presentation)
- Professor David Hunt – Role of the voltage-gated potassium channel subunit Kv8.2 in inherited retinal disease and interaction with other channel proteins (poster)
- Dr Livia Carvalho – Validation and comparison of Achromatopsia mouse lines expressing a fluorescent marker in cone photoreceptors (poster)
- Dr Carla Mellough – A comparative assessment of retinal organoid differentiation from human pluripotent stem cells based on differing methods of embryoid body derivation (poster)
- Samantha Lee (pictured) – The relationship between female reproductive factors and optic disc parameters in young female adults (poster)
- Gareth Lingham – An investigation on whether adults in the Busselton Health Study who have higher levels of Vitamin D – a vitamin derived from exposure to sunlight – are less likely to be short-sighted (poster)
- Dr Michael Richards – Novel sound localisation deficit in unilateral amblyopia (presentation)

Blonde, brunette or redhead: melanin type holds the key

Professor David Mackey and Dr Seyhan Yazar have contributed to new research on the determinants of hair colour.

Hair colour is one of the most recognisable visual traits in European populations and is under strong genetic control.

The research, published in Nature Genetics, examined the genetic profiles of 300,000 people of European descent and found that two types of melanin pigment – eumelanin and pheomelanin – determined hair colour.



New research provides insight into hair colour

Different concentrations of melanin could decide whether a person is born with blonde, brown or red hair. Pheomelanin is a lighter pigment found in red hair.

To read the full research paper, visit

www.nature.com/articles/s41588-018-0100-5

You're invited:

Ian Constable Lecture to focus on immune responses in the eye

The 19th annual Ian Constable Lecture will be held at The University Club Auditorium, UWA, on Wednesday, September 5.

Professor Andrew Dick, Director of the UCL Institute of Ophthalmology at University College London, will deliver the lecture: A Tale of Two Diseases: Regulating Immune Responses in the Retina.

Professor Dick is a clinician-scientist and immuno-biologist. His clinical expertise is in inflammatory disorders of the eye.

He will discuss how dysregulation in the body's immune system can generate blinding disease, focusing on uveitis and age-related macular degeneration.

Entry to the lecture is free but tickets must be booked.



Professor Andrew Dick

For more information visit
www.eventbrite.com.au/e/tail-of-two-diseases-regulating-immune-responses-in-the-retina-tickets-47249673044

LEI remembers Emeritus Professor Bernard Catchpole



Emeritus Professor Bernard Catchpole

Emeritus Professor Bernard Catchpole passed away in Perth on April 9.

He was a key figure in promoting ophthalmology

as a speciality at UWA and helped attract Professor Ian Constable away from a promising career in the United States to establish the inaugural Lions Chair of Ophthalmology at the University in 1975.

Professor Catchpole was just the second Professor of Surgery appointed at the UWA medical school

and he was involved in a number of important initiatives, including the Busselton Study.

He introduced many innovations in his teaching programs and after a long and successful career, retired in 1989 – though he continued to teach in a voluntary capacity well into his 80s.

Thank you for your donation

The LEI thanks everyone who made a donation to this year's Tax Appeal.

The appeal focused on the story of Gaye, a patient of Professor Ian McAllister. Gaye suffered a central retinal vein occlusion but was able to join a clinical trial at the LEI involving the creation of a specialised laser bypass treatment.

Gaye regained almost all her sight after participating in the trial.

To everyone who was able to make a contribution to the Tax Appeal, we thank you for supporting LEI research.



Professor Ian McAllister with his patient Gaye, who told her story in this year's Tax Appeal

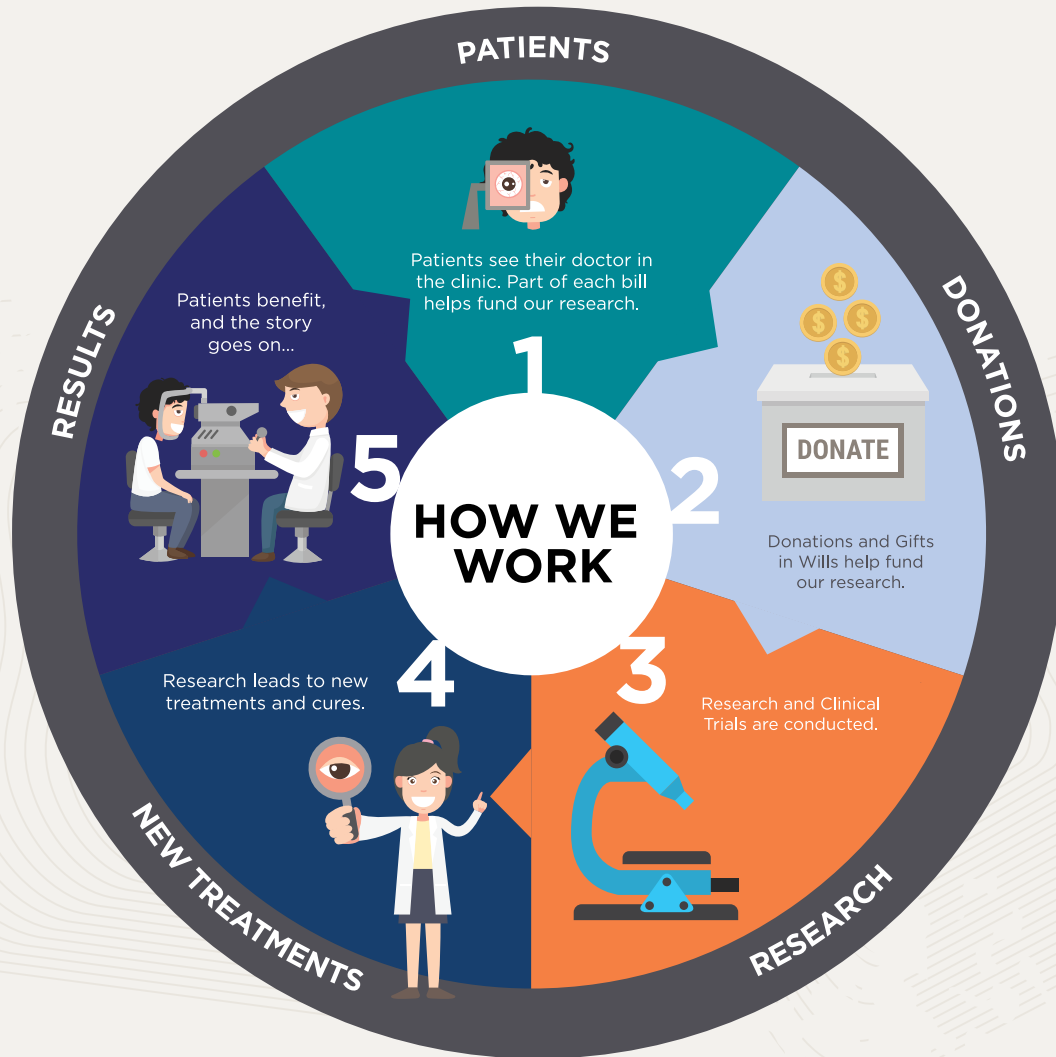
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The LEI is a not-for-profit organisation



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